V. *An Account of an Earthquake felt at* Liſbon, December 26, 1764: *In a Letter to the Rev.* Samuel Chandler, *D. D. F. R. S.*

Read Jan. 31, 1765. WEdneſday December 26, 1764, I was awakened about 3 o'clock in the morning by violent ſqualls of wind, and a deluge of rain, accompanied with almoſt uninterrupted flaſhes of lightning, many of which ended in a bright purple. About 8, we had ſome diſtant claps of thunder; at 10, ſome more. Before 11, the rain ceaſed, and the ſun ſhone forth. In leſs than half an hour after, we had a ſudden ſhock, preceded by a rumbling noiſe, and ſucceeded by a dead calm of at leaſt half an hour. Moſt of them here maintain, that it was the ſevereſt ſhock they have felt; but as it laſted no longer than you could clap your hands twice, it did little or no damage. They unanimouſly declare however, that they never had any thing of the ſame kind, this being a ſudden perpendicular heaving up; whereas all their former ſhocks were undulatory. As it is the only one I have felt, I can give no deciſion; and I dare ſay you will believe my curioſity will be ſatisfied without a ſecond to compare with it. I had folly enough, in the mean time, to invent a method for meaſuring the ſtrength and direction of future ſhocks. Laſt night, they ſay, we had a gentle ſhock about 12 o'clock.

Thank God, I was faſt aſleep, and did not feel it. Such weather I had no conception of 'till I knew it. The rains pour in ſuch abundance, that the cauſeways in ſeveral parts of the ſtreets are plowed more than half a yard deep by the torrent, and the guſts of wind are moſt dreadful. We have already got ſome bad accounts from ſea.

To know the ſtrength and direction of earthquakes.

Take a veſſel, making the portion of a ſphere of three or four feet diameter. Place it on a ground-floor. Duſt it all over on the inſide with a barber's puff, and then pour ſome water gently into it. Upon the ſmalleſt tremor, the water will waſh the flower from the parts of the veſſel upon which it riſes; and will of conſequence mark the direction and height of the ſhock.